

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	RWF 321-34	Wellbore No.	
Well Name	RWF 321-34	Common Name	RWF 321-34
Project	RU 27-06S-094W	Site	RMV 28-27 Pad
Vertical Section	210.43 (°)	North Reference	True
Azimuth		Origin E/W	
Origin N/S		UWI	RWF 321-34
Spud Date	7/19/2012		
Active Datum	KB @5,323.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	MOSTAR
Date Started	7/19/2012	Ended	
Tool Name	MWD	Engineer	

#### 2.1.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0.0	0.00	0.00	0.00	0.00	0.00

#### 2.1.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
7/19/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/19/2012	NORMAL	103.0	0.62	216.39	103.00	-0.45	-0.33	0.55	0.60	0.60	0.00	216.39
	NORMAL	164.0	1.67	204.87	163.99	-1.52	-0.90	1.77	1.75	1.72	-18.89	341.83
	NORMAL	255.0	3.87	209.97	254.87	-5.38	-2.99	6.16	2.43	2.42	5.60	8.94
	NORMAL	346.0	7.04	212.70	345.45	-12.74	-7.54	14.80	3.49	3.48	3.00	6.04
7/20/2012	NORMAL	436.0	11.88	213.93	434.20	-25.07	-15.70	29.57	5.38	5.38	1.37	3.00
	NORMAL	527.0	14.78	211.55	522.74	-42.74	-27.00	50.53	3.24	3.19	-2.62	348.12
	NORMAL	619.0	17.51	206.98	611.11	-65.08	-39.42	76.08	3.27	2.97	-4.97	332.83
	NORMAL	710.0	21.20	210.67	696.95	-91.44	-54.03	106.21	4.27	4.05	4.05	20.09
	NORMAL	800.0	23.58	208.74	780.16	-121.23	-70.99	140.48	2.77	2.64	-2.14	341.94
	NORMAL	891.0	26.04	207.95	862.76	-154.84	-89.11	178.64	2.73	2.70	-0.87	351.97
	NORMAL	982.0	27.62	208.83	943.96	-190.96	-108.64	219.68	1.79	1.74	0.97	14.50
	NORMAL	1,058.0	27.07	209.58	1,011.47	-221.44	-125.67	254.59	0.85	-0.72	0.99	148.27
7/21/2012	NORMAL	1,152.0	26.82	211.77	1,095.26	-258.07	-147.40	297.17	1.09	-0.27	2.33	105.11
	NORMAL	1,270.0	27.91	211.42	1,200.06	-304.27	-175.81	351.40	0.93	0.92	-0.30	351.45
	NORMAL	1,365.0	27.39	210.98	1,284.21	-341.98	-198.65	395.48	0.59	-0.55	-0.46	201.24
	NORMAL	1,461.0	26.55	210.54	1,369.77	-379.39	-220.92	439.02	0.90	-0.88	-0.46	193.17
	NORMAL	1,557.0	26.99	209.49	1,455.48	-416.83	-242.55	482.26	0.67	0.46	-1.09	312.46
	NORMAL	1,653.0	26.64	209.57	1,541.15	-454.51	-263.89	525.56	0.37	-0.36	0.08	174.15
	NORMAL	1,748.0	25.76	210.98	1,626.39	-490.73	-285.03	567.50	1.13	-0.93	1.48	145.35
	NORMAL	1,843.0	25.67	211.24	1,711.99	-526.03	-306.33	608.71	0.15	-0.09	0.27	128.70

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
7/21/2012	NORMAL	1,939.0	25.80	209.75	1,798.46	-561.94	-327.48	650.40	0.69	0.14	-1.55	280.69
	NORMAL	2,034.0	26.24	211.68	1,883.84	-597.76	-348.76	692.06	1.00	0.46	2.03	63.41
	NORMAL	2,130.0	26.73	212.56	1,969.76	-634.02	-371.53	734.86	0.65	0.51	0.92	39.09
	NORMAL	2,225.0	27.12	211.51	2,054.46	-670.49	-394.34	777.86	0.65	0.41	-1.11	308.89
	NORMAL	2,321.0	27.47	210.28	2,139.78	-708.26	-416.95	821.88	0.69	0.36	-1.28	301.27
	NORMAL	2,417.0	27.12	210.37	2,225.09	-746.26	-439.17	865.90	0.37	-0.36	0.09	173.31
	NORMAL	2,511.0	26.46	211.51	2,309.00	-782.60	-460.95	908.26	0.89	-0.70	1.21	142.61
	NORMAL	2,606.0	27.30	210.72	2,393.73	-819.38	-483.14	951.21	0.96	0.88	-0.83	336.61
	NORMAL	2,702.0	26.20	210.54	2,479.46	-856.56	-505.16	994.42	1.15	-1.15	-0.19	184.13
	NORMAL	2,798.0	26.64	209.84	2,565.43	-893.48	-526.63	1,037.13	0.56	0.46	-0.73	324.39
7/22/2012	NORMAL	2,893.0	25.89	210.72	2,650.62	-929.78	-547.83	1,079.17	0.89	-0.79	0.93	152.95
	NORMAL	2,989.0	26.59	210.80	2,736.73	-966.26	-569.54	1,121.61	0.73	0.73	0.08	2.93
	NORMAL	3,084.0	26.59	209.84	2,821.68	-1,002.96	-591.00	1,164.14	0.45	0.00	-1.01	269.57
	NORMAL	3,180.0	26.07	209.66	2,907.72	-1,039.93	-612.13	1,206.71	0.55	-0.54	-0.19	188.65
	NORMAL	3,276.0	26.55	209.31	2,993.78	-1,076.97	-633.07	1,249.26	0.53	0.50	-0.36	341.93
	NORMAL	3,371.0	26.59	209.13	3,078.74	-1,114.05	-653.82	1,291.74	0.09	0.04	-0.19	296.34
	NORMAL	3,467.0	26.95	208.17	3,164.45	-1,152.00	-674.55	1,334.96	0.59	0.38	-1.00	309.35
	NORMAL	3,562.0	26.07	209.66	3,249.47	-1,189.12	-695.04	1,377.34	1.16	-0.93	1.57	143.58
	NORMAL	3,658.0	26.15	209.84	3,335.67	-1,225.80	-716.00	1,419.59	0.12	0.08	0.19	44.80
	NORMAL	3,754.0	25.14	209.22	3,422.21	-1,261.95	-736.48	1,461.13	1.09	-1.05	-0.65	194.60
	NORMAL	3,849.0	25.85	208.52	3,507.96	-1,297.76	-756.22	1,502.00	0.81	0.75	-0.74	336.69
	NORMAL	3,944.0	24.53	209.57	3,593.92	-1,333.11	-775.85	1,542.42	1.47	-1.39	1.11	161.77
	NORMAL	4,040.0	22.99	210.28	3,681.79	-1,366.63	-795.13	1,581.10	1.63	-1.60	0.74	169.80
	NORMAL	4,136.0	21.45	212.47	3,770.66	-1,397.63	-814.01	1,617.39	1.82	-1.60	2.28	152.74
	NORMAL	4,231.0	19.69	213.88	3,859.60	-1,425.58	-832.26	1,650.73	1.92	-1.85	1.48	164.94
	NORMAL	4,327.0	17.93	214.06	3,950.46	-1,451.25	-849.55	1,681.62	1.83	-1.83	0.19	178.20
	NORMAL	4,422.0	17.45	212.12	4,040.97	-1,475.43	-865.32	1,710.45	0.80	-0.51	-2.04	229.92
	NORMAL	4,517.0	15.78	211.68	4,132.00	-1,498.48	-879.68	1,737.61	1.76	-1.76	-0.46	184.10
	NORMAL	4,613.0	12.97	213.27	4,224.99	-1,518.60	-892.44	1,761.42	2.96	-2.93	1.66	172.77
	NORMAL	4,708.0	11.12	213.79	4,317.89	-1,535.13	-903.39	1,781.22	1.95	-1.95	0.55	176.90
7/23/2012	NORMAL	4,803.0	8.97	213.27	4,411.43	-1,548.94	-912.55	1,797.76	2.27	-2.26	-0.55	182.16
	NORMAL	4,899.0	7.56	217.84	4,506.43	-1,560.18	-920.53	1,811.50	1.62	-1.47	4.76	157.27
	NORMAL	4,994.0	5.85	212.12	4,600.78	-1,569.22	-926.94	1,822.54	1.93	-1.80	-6.02	198.51
	NORMAL	5,089.0	3.78	207.82	4,695.44	-1,576.09	-930.97	1,830.51	2.21	-2.18	-4.53	187.75
	NORMAL	5,185.0	2.73	200.52	4,791.29	-1,581.03	-933.25	1,835.92	1.17	-1.09	-7.60	197.92
	NORMAL	5,280.0	1.27	216.34	4,886.23	-1,584.00	-934.67	1,839.20	1.63	-1.54	16.65	167.07
	NORMAL	5,376.0	0.61	259.32	4,982.21	-1,584.95	-935.80	1,840.59	0.96	-0.69	44.77	153.21
7/24/2012	NORMAL	5,472.0	0.35	298.43	5,078.21	-1,584.91	-936.56	1,840.94	0.42	-0.27	40.74	146.88
	NORMAL	5,567.0	0.13	296.06	5,173.21	-1,584.72	-936.91	1,840.95	0.23	-0.23	-2.49	181.40
	NORMAL	5,663.0	0.35	2.85	5,269.21	-1,584.38	-936.99	1,840.70	0.34	0.23	69.57	88.59
	NORMAL	5,759.0	0.44	52.87	5,365.21	-1,583.86	-936.69	1,840.10	0.36	0.09	52.10	101.29
	NORMAL	5,854.0	0.61	48.12	5,460.20	-1,583.31	-936.02	1,839.28	0.18	0.18	-5.00	343.26
	NORMAL	5,950.0	0.66	46.45	5,556.20	-1,582.58	-935.24	1,838.27	0.06	0.05	-1.74	338.85
	NORMAL	6,045.0	0.97	47.42	5,651.19	-1,581.66	-934.25	1,836.97	0.33	0.33	1.02	3.03
	NORMAL	6,141.0	0.22	160.80	5,747.18	-1,581.29	-933.59	1,836.31	1.12	-0.78	118.10	169.19
	NORMAL	6,236.0	0.18	175.30	5,842.18	-1,581.61	-933.52	1,836.55	0.07	-0.04	15.26	135.42
	NORMAL	6,332.0	0.70	175.56	5,938.18	-1,582.34	-933.46	1,837.16	0.54	0.54	0.27	0.35
	NORMAL	6,428.0	0.88	189.27	6,034.17	-1,583.66	-933.53	1,838.33	0.27	0.19	14.28	53.39
	NORMAL	6,523.0	0.97	182.68	6,129.16	-1,585.18	-933.69	1,839.72	0.15	0.09	-6.94	306.90
	NORMAL	6,619.0	0.26	167.04	6,225.15	-1,586.20	-933.68	1,840.60	0.75	-0.74	-16.29	185.56
	NORMAL	6,714.0	0.31	139.00	6,320.15	-1,586.61	-933.46	1,840.83	0.15	0.05	-29.52	275.34
7/25/2012	NORMAL	6,809.0	0.48	129.86	6,415.15	-1,587.06	-932.99	1,840.98	0.19	0.18	-9.62	335.05
	NORMAL	6,905.0	0.26	190.06	6,511.15	-1,587.53	-932.72	1,841.25	0.43	-0.23	62.71	147.25
	NORMAL	7,001.0	0.48	209.13	6,607.14	-1,588.09	-932.95	1,841.86	0.26	0.23	19.86	39.00
	NORMAL	7,096.0	0.61	234.18	6,702.14	-1,588.74	-933.55	1,842.72	0.28	0.14	26.37	74.29
	NORMAL	7,192.0	0.66	220.38	6,798.13	-1,589.46	-934.33	1,843.73	0.17	0.05	-14.38	281.12
	NORMAL	7,287.0	0.83	217.66	6,893.13	-1,590.42	-935.10	1,844.95	0.18	0.18	-2.86	346.89

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
7/25/2012	NORMAL	7,383.0	1.19	219.94	6,989.11	-1,591.73	-936.17	1,846.62	0.38	0.38	2.38	7.51
	NORMAL	7,478.0	1.67	221.26	7,084.08	-1,593.53	-937.71	1,848.96	0.51	0.51	1.39	4.59
	NORMAL	7,574.0	1.23	207.82	7,180.05	-1,595.49	-939.12	1,851.36	0.58	-0.46	-14.00	211.11
	NORMAL	7,669.0	1.23	203.07	7,275.03	-1,597.33	-939.99	1,853.39	0.11	0.00	-5.00	267.63
	NORMAL	7,763.0	1.23	195.42	7,369.01	-1,599.23	-940.65	1,855.37	0.17	0.00	-8.14	266.18
	NORMAL	7,859.0	1.41	193.93	7,464.98	-1,601.37	-941.21	1,857.49	0.19	0.19	-1.55	348.46
	NORMAL	7,930.0	1.50	198.94	7,535.96	-1,603.10	-941.72	1,859.24	0.22	0.13	7.06	57.24
	NORMAL	7,975.0	1.50	198.94	7,580.94	-1,604.21	-942.11	1,860.40	0.00	0.00	0.00	0.00